

Amendment under 37 CFR § 1.116
Application No. 09/783,598
Attorney Docket No. 010153

REMARKS

Rejections under 35 USC §103(a)

Claims 1-3 and 5 were rejected under 35 USC §103(a) as being obvious over Beilin et al. (U.S. Patent No. 5,916,453) in view of Albrecht et al. (U.S. Patent No. 4,968,585).

Claim 1 has been amended to recite "wherein a side face of each of said posts is covered by electrically conductive film so as to provide electrical contact between said one side and said other side of the substrate." Claim 2 has been cancelled.

According to Beilin et al, the apertures are filled with conductive material, but the side face of the posts is NOT covered by electrically conductive film. Also, Albrecht et al does not discuss covering of the posts by electrically conductive film so as to provide electrical contact between one side and the other side of the substrate.

Thus, Beilin et al and Albrecht et al do not teach or suggest "wherein a side face of each of said posts is covered by electrically conductive film so as to provide electrical contact between said one side and said other side of the substrate."

For at least these reasons, claim 1 patentably distinguishes over Beilin et al and Albrecht et al.

Moreover, as pointed out in the previous response, the Examiner has not established a prima facie case of obviousness, which requires: (1) the prior art reference (or references when combined) must teach or suggest **all the claim limitations**; (2) there must be some **suggestion or**

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motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and (3) there must be a **reasonable expectation of success**. The rejection meets none of these requirements as discussed in the previous response. The following arguments supplement the previous argument.

In order to show suggestion or motivation, a reference under 35 USC 103 must be analogous prior art. More specifically, in order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

Here, the claimed invention is directed to a **front-and-back electrically conductive substrate**. On the other hand, Beilin et al discloses a **method of planarizing** structures on wafers and substrates by polishing. Albrecht et al discloses a **microfabricated cantilever stylus** with integrated conical tip. These references are not in the field of applicant's endeavor or, reasonably pertinent to the particular problem with which the inventor was concerned.

Responding to Applicant's previous response, the Examiner alleged as follows:

Examiner disagrees because the element (18 or 118) as disclosed in the Beilin reference deposit in the opening (117) by a CVD process and an **anisotropically etched process applied to remove a photoresist** (16 or 116) and layer (20 or 120) to formed post, so the technique as disclosed

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in the Beilin reference that **the posts (18 or 118) are formed by the anisotropically etched process.**

(Office Action, page 5).

Claim 1, however, recites "said posts being anisotropically **etched silicon**" but NOT "said posts formed by anisotropically etched process." In Beilin et al, it is a photosensitive layer which is etched but not the posts. Moreover, the posts 18 or 118 are not silicon.

Regarding Albrecht et al, the Examiner alleged as follows:

Examiner disagrees because as shown in figure 1 of Albrecht reference a silicon substrate (10) having top (12) and bottom surface (opposite surface of element 12), so **the silicon substrate is consider[ed] as a front and back electrically conductive substrate.** Further, the post (18) as disclosed, for example, in an abstract (see lines 4-6) clearly teaches that the post 18 is formed by anisotropically etched silicon.

(Office Action, page 6). The Examiner is alleging that because the silicon substrate has top and bottom surfaces, the silicon substrate is considered as a front and back electrically conductive substrate. Here, the Examiner is merely applying the claimed term to the reference. The Examiner is taking advantage of knowledge other than what was within the level of ordinary skill in the art at the time the claimed invention was made. The knowledge is gleaned from applicant's disclosure. It is impermissible hindsight. The MPEP explains as follows:

The requirement "at the time the invention was made" is to avoid impermissible hindsight. See MPEP § 2145, paragraph X.A. for a discussion of rebutting applicants' arguments that a rejection is based on hindsight.

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"It is difficult but necessary that the decisionmaker forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

(MPEP 2141.01(a) III). The Examiner further alleges:

Thus, Beilin discloses the post that being formed by the anisotropically etched process, Albrecht teaches the post is formed by the anisotropically etched silicon. Therefore, it would have been obvious . . . to have a teaching of Albrecht employed in the substrate of Beilin in order to achieve a fine pitch interconnection in the wiring board.

However, nothing in Albrecht et al indicates that the microfabricated cantilever stylus can be related to the front-and-back electrically conductive substrate as recited in claim 1. The Examiner does not properly reason how the **method of planarizing structures on wafers and substrates by polishing**, disclosed in Beilin et al and the **microfabricated cantilever stylus with integrated conical tip**, disclosed in Albrecht et al are combined to result in the claimed **front-and-back electrically conductive substrate**.

Thus, there is no suggestion or motivation to combine Beilin et al and Albrecht et al. For at least these reasons, claim 1 patentably distinguishes over Beilin et al and Albrecht et al. Claims 3 and 5, directly depending from claim 1, also patentably distinguish over Beilin et al and Albrecht et al for at least the same reasons.

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Claims 4 and 6 were rejected under 35 USC §103(a) as being obvious over Beilin et al. (U.S. Patent No. 5,916,453) in view of Albrecht et al. (U.S. Patent No. 4,968,585), and further in view of Onishi et al. (U.S. Patent No. 5,459,368).

Claims 4 and 6, both directly depending from claim 1, also patentably distinguish over Beilin et al and Albrecht et al for at least the same reasons.

Onishi et al is cited for allegedly disclosing an electronic device mounted on a pad of a substrate. Such disclosure, however, does not remedy the deficiencies of Beilin et al and Albrecht et al.

For at least these reasons, claims 4 and 6, patentably distinguish over Beilin et al, Albrecht et al and Onishi et al.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Sadao Kinashi

Attorney for Applicants

Registration No. 48,075

Telephone: (202) 822-1100

Facsimile: (202) 822-1111

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